

## REMARKS

Applicant has carefully considered the official communication dated June 13, 2007. Applicant respectfully submits that the above amendments and the following remarks are fully responsive to the official communication, and Applicant respectfully requests reconsideration of the rejections.

The claims have been amended in light of the official communication. It is submitted that no new matter has been added as a result of the amendments. None of the claims have been cancelled; therefore, claims 1-22 remain at issue in the application.

### **A. Claim Rejections under 35 USC §101**

#### **Claims 1-17**

In paragraph 4 of the Official Action, the Examiner alleges that claims 1-17 lack the necessary physical articles or objects to constitute a machine or manufacture. Applicant respectfully submits that the claims are patentable subject matter in accordance with 35 USC §101. In line with the statutory requirement, claims 1 to 17 are amended and directed to “a computer software program” which clearly falls within the scope of the prescribed category “manufacture” under 35 USC §101. Furthermore, the person skilled in the art (i.e. a relational database software programmer) would readily regard the schema claimed in claims 1-17 as the framework upon which relational databases are built, as explained in detail in paragraphs [0002] – [0003] of the specification. Accordingly, Applicant respectfully submits that claims 1 to 17 constitute patentable subject matter.

In addition, the Examiner states that claims 1-17 are, at best, functional descriptive material *per se*. The Examiner states that “when functional descriptive material is recorded on some computer readable medium, it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized” (Office Action, p. 3). Accordingly, Applicant amended claim 1 to “A computer software program recorded on a machine-readable medium and containing machine-readable instructions . . .”

Paragraph [0004] of the present application outlines drawbacks associated with existing schema for relational databases and paragraph [0005] outlines that the object of the present invention is to address these drawbacks. Claim 1 clearly defines the schema described in detail within paragraphs [0066] – [0067] of the specification with reference to Figure 2. As explained in these paragraphs, once the schema is configured, “all Entity and Field records required to store a new instance of an entity ... can be automatically created”. As further explained in paragraph [0078], “any number of EntityTypes may be defined and stored in this schema without requiring schema changes ...”, thereby achieving the object of the invention in paragraph [0005]. The particular arrangement of the schema defined in claim 1 serves to meet the object of the invention, and thereby at least amounts to the “functional descriptive material” referred to by the Examiner, and not “nonfunctional descriptive material” (e.g. music, e-mails, word processor files, etc.) recorded on a computer medium.

Accordingly, Applicant submits that claims 1-17 combining the use of machines with a schema (that form the framework upon which relational databases are built), claim patentable subject matter under 35 U.S.C. §101.

## Claims 18-22

Furthermore, claims 18 to 21 are directed to “a method” which clearly falls within the scope of the prescribed category “process” under 35 USC §101. As previously discussed, the particular arrangement of the inter-related tables defined in claim 18 serves to meet the object of the invention in paragraph [0005], and it is the meeting of this object as discussed in paragraphs [0066] – [0067] which is a “useful, concrete and tangible result”. There is no statutory requirement that the claims must explicitly state the “useful, concrete and tangible result”, rather that is the function of the object of the invention. Accordingly, Applicant submits that claims 18 to 21 relate to patentable subject matter.

Finally, claim 22 is directed to “a computational device” which clearly falls within the scope of the prescribed category “machine” under 35 USC §101. As explained in MPEP § 2106 IV B, “an apparatus claim with process steps is not classified as a ‘hybrid’ claim; instead, it is simply an apparatus claim including functional limitations. See, e.g., *R.A.C.C. Indus. v. Stun-*

*Tech, Inc.*, 178 F.3d 1309 (Fed. Cir. 1998)”. Accordingly, Applicant submits that claim 22 relates to patentable subject matter under 35 U.S.C. §101

## B. Rejection of Claims under 35 USC §102

Claims 1-14 and 16-22 stand rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No, 7,031,956 to Lee. Applicant respectfully submits that Lee neither discloses nor suggests a database management schema as currently being claimed.

Lee discloses a system for generating a relational database management schema 22 from an input eXtensible Markup Language (XML) document 12 containing a document-type definition (DTD) 18. As can best be seen in Figure 1a, the DTD 18 can be used to generate a MetaData schema including (mapping) MetaTables 36,90,92,96,98,100,102 which, in turn, are used to generate the database management schema 22 (col. 16, lines 53-57). The MetaData schema is shown in Figure 1B, whereas details of the database management schema 22 are not shown at all.

Claim 1 is limited to providing “a database management system in accordance with a database management schema”. The skilled person would immediately recognize the claimed database management schema (relating to the database management system) as being schema 22, and not the MetaData schema shown in Figure 1B which is not used to manage the database, but is rather used to generate the database management schema 22 (that is actually used to manage the database). The schema-generation schema of Figure 1B is clearly not a database management schema. Accordingly, claim 1 is not anticipated by Lee which does not disclose any details of the database management schema 22.

Claim 1 further defines that storage tables are related to second and third tables which, in turn, are each related to a first table. These features are also not disclosed in the schema-generation schema of Figure 1B of Lee. Turning to Figure 1B, any of the first tables 30 relate to a second table 36, however, there is no third table which also relates to the first table 30. Accordingly, Figure 1B also does not show storage tables which relate to both the second and third tables. Therefore, claim 1 is further not anticipated by Lee.

Applicant respectfully submits that claims 2 to 17 are not anticipated by Lee as they ultimately depend upon claim 1 which, for the foregoing reasons, is also not anticipated by Lee.

Applicant amended claim 18 to include the distinguishing features of claim 1. Similarly, Applicant submits that claims 18 to 22 are not anticipated by Lee for the foregoing reasons.

**C. Rejection of Claims under 35 USC §103**

Claim 15 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Lee in view of U.S. Patent Application Publication No. US2003/0167455 to Iborra et al. Applicant submits that claim 15 is patentable over the combination of these references.

Claim 15 depends from claim 1 and includes all of its limitation. For the reasons given above, that Lee does not disclose any details of the database management schema of the present invention, the addition of Iborra does not overcome the deficiencies noted in Lee. Therefore, claim 15 is patentable over the combination of references.

It is respectfully submitted that all of the Examiner's objections have been successfully traversed. Accordingly, it is submitted that the application is now in condition for allowance. Reconsideration and allowance of the application are courteously solicited.

Respectfully submitted,

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